

WHAT IS CLAIMED IS

1. An isolated polypeptide comprising an amino acid sequence having at
5 least 85% sequence identity to SEQ ID NO:15, 17, or 19, wherein said polypeptide is
characterized by high-level expression.

2. The isolated polypeptide of claim 1, wherein said polypeptide
comprises an amino acid sequence set forth in SEQ ID NO:15, 17, or 19.
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3. A composition comprising the polypeptide of claim 1.

4. A composition comprising the polypeptide of claim 2.

5. An isolated nucleic acid molecule comprising a nucleotide sequence
15 having at least 85% sequence identity to SEQ ID NO:14, 16, or 18, wherein said
nucleotide sequence encodes a polypeptide characterized by high-level expression.

6. The isolated nucleic acid molecule of claim 5, wherein said nucleotide
20 sequence is selected from the group consisting of:

a) a nucleotide sequence comprising the sequence set forth in
SEQ ID NO:14, 16, or 18; and,

b) a nucleotide sequence comprising the sequence encoding a
polypeptide comprising the amino acid sequence set forth in SEQ ID NO:15, 17, or
25 19.

7. A DNA construct comprising the nucleic acid molecule of claim 5.

8. A DNA construct comprising the nucleic acid molecule of claim 6.
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9. A vector comprising the nucleic acid molecule of claim 5.

10. A vector comprising the nucleic acid molecule of claim 6.

11. A cell comprising the nucleic acid molecule of claim 5.
12. A cell comprising the nucleic acid molecule of claim 6.
- 5 13. A cell comprising the vector of claim 9.
14. A cell comprising the vector of claim 10.
15. A method of producing a polypeptide comprising:
- 10 a) introducing into a cell a nucleic acid molecule comprising a nucleotide sequence having at least 85% sequence identity to SEQ ID NO:14, 16, or 18, wherein said sequence encodes said polypeptide and said polypeptide is characterized by high expression;
- b) culturing said cell under conditions that allow expression of
- 15 said nucleotide sequence.
16. The method of claim 15, wherein said nucleic acid molecule comprises a nucleotide sequence selected from the group consisting of:
- a) a nucleotide sequence comprising a sequence encoding a
- 20 polypeptide comprising the amino acid sequence set forth in SEQ ID NO:15, 17, or 19
- b) a nucleotide sequence comprising the sequence set forth in SEQ ID NO:14, 16, or 18.
17. The method of claim 15 further comprising isolating said polypeptide.
- 25 18. The method of claim 16 further comprising isolating said polypeptide.
19. A method of increasing the level of expression of a factor VIII polypeptide in a cell comprising:
- 30 a) introducing into said cell a nucleic acid molecule comprising a nucleotide sequence having at least 85% sequence identity to SEQ ID NO:14, 16, or 18, wherein said sequence encodes said factor VIII polypeptide and said factor VIII polypeptide is characterized by high expression;

b) culturing said cell under conditions that allow expression of said nucleic acid molecule.

20. The method of claim 19, wherein said nucleic acid molecule comprises
5 a nucleotide sequence selected from the group consisting of:

a) a nucleotide sequence comprising a sequence encoding a polypeptide comprising the amino acid sequence set forth in SEQ ID NO:15, 17, or 19; and,

b) a nucleotide sequence comprising the sequence set forth in
10 SEQ ID NO:14, 16, or 18.

21. The method of claim 19 further comprising isolating said polypeptide.

22. The method of claim 20 further comprising isolating said polypeptide.
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23. A method of treating a factor VIII deficiency comprising administering to a subject in need thereof a composition comprising a therapeutically effective amount of a polypeptide, wherein said polypeptide comprises an amino acid sequence having at least 85% sequence identity to SEQ ID NO:15, 17,
20 19 and said polypeptide is characterized by high-level expression.

24. The method of claim 23, wherein said wherein said polypeptide comprises an amino acid sequence set forth in SEQ ID NO:15, 17, or 19.

25. A method of treating a factor VIII deficiency comprising administering to a subject in need thereof a composition comprising a therapeutically effective amount of a nucleic acid molecule, where said nucleic acid molecule comprises a nucleotide sequence having at least 85% sequence identity to SEQ ID NO:14, 16, or 18, wherein said nucleic acid molecule encodes a factor VIII
30 polypeptide characterized by high-level expression.

26. The method of claim 25, wherein said nucleic acid molecule comprises a nucleotide sequence selected from the group consisting of:

a) a nucleotide sequence comprising the sequence set forth in
SEQ ID NO:14, 16, or 18; and,

b) a nucleotide sequence comprising a sequence encoding a
polypeptide comprising the amino acid sequence set forth in SEQ ID NO:15, 17, or

5 19.